



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I re the Application of )  
 )  
Hugh Gramajo et al. )  
 )  
Serial No. 10/045,612 )  
 )  
Filed: October 23, 2001 )  
 )  
For: ANTIBIOTIC PRODUCTION II )

SUBMISSION OF SEQUENCE LISTING  
UNDER 37 C.F.R. §§1.821-1.825 AND PRELIMINARY AMENDMENT

The present submission is in response to the Office communication dated March 14, 2002 enclosing a Notice To File Missing Parts Of Nonprovisional Application.

To comply with the requirements under 37 C.F.R. §§1.821-1.825, submitted herewith is a sequence listing of the amino acids and nucleotides presented in the above-referenced application. The sequence listing is being submitted in both paper copy and computer-readable form. Applicants respectfully request entry of the sequence listing into the above identified patent application. The undersigned hereby verifies that the paper copy and computer readable form of the sequence listing are identical and do not contain any new matter. In the event that a fee is required, the Commissioner is authorized to charge the account of the undersigned, Account No. 04-1406. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

DANN, DORFMAN, HERRELL AND SKILLMAN  
A Professional Corporation

By Patrick J. Hagan  
Patrick J. Hagan  
PTO Registration No. 27,643



10045612 053102 #3

COPY OF PAPERS  
ORIGINALLY FILED

SEQUENCE LISTING

<10> Gramajo, Hugo C  
Rodriguez, Eduardo J

<120> Antibiotic Production II

<130> 0380-P02327US1

<140> US 10/045,612

<141> 2001-10-23

<150> US 60/242,533

<151> 2000-10-23

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 35 40 45  
 Ala Leu Gly Gly Asp Thr Pro Ala Thr Ser Tyr Leu Asp Ile Ala Lys  
 50 55 60  
 Val Leu Lys Ala Ala Arg Glu Ser Gly Ala Asp Ala Ile His Pro Gly  
 65 70 75 80  
 Tyr Gly Phe Leu Ser Glu Asn Ala Glu Phe Ala Gln Ala Val Leu Asp  
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 Ala Gly Leu Ile Trp Ile Gly Pro Pro Pro His Ala Ile Arg Asp Arg  
 100 105 110  
 Gly Glu Lys Val Ala Ala Arg His Ile Ala Gln Arg Ala Gly Ala Pro  
 115 120 125  
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 130 135 140  
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 145 150 155 160  
 Gly Gly Gly Gly Arg Gly Leu Lys Val Ala Arg Thr Leu Glu Glu Val  
 165 170 175  
 Pro Glu Leu Tyr Asp Ser Ala Val Arg Glu Ala Val Ala Ala Phe Gly  
 180 185 190  
 Arg Gly Glu Cys Phe Val Glu Arg Tyr Leu Asp Lys Pro Arg His Val  
 195 200 205  
 Glu Thr Gln Cys Leu Ala Asp Thr His Gly Asn Val Val Val Val Ser  
 210 215 220  
 Thr Arg Asp Cys Ser Leu Gln Arg Arg His Gln Lys Leu Val Glu Glu  
 225 230 235 240  
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 Ser Ser Lys Ala Ile Leu Lys Glu Ala Gly Tyr Gly Gly Ala Gly Thr  
 260 265 270  
 Val Glu Phe Leu Val Gly Met Asp Gly Thr Ile Phe Phe Leu Glu Val  
 275 280 285  
 Asn Thr Arg Leu Gln Val Glu His Pro Val Thr Glu Glu Val Ala Gly  
 290 295 300  
 Ile Asp Leu Val Arg Glu Met Phe Arg Ile Ala Asp Gly Glu Glu Leu  
 305 310 315 320  
 Gly Tyr Asp Asp Pro Ala Leu Arg Gly His Ser Phe Glu Phe Arg Ile  
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Asn Gly Glu Asp Pro Gly Arg Gly Phe Leu Pro Ala Pro Gly Thr Val  
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 Thr Leu Phe Asp Ala Pro Thr Gly Pro Gly Val Arg Leu Asp Ala Gly  
 355 360 365  
 Val Glu Ser Gly Ser Val Ile Gly Pro Ala Trp Asp Ser Leu Leu Ala  
 370 375 380  
 Lys Leu Ile Val Thr Gly Arg Thr Arg Ala Glu Ala Leu Gln Arg Ala  
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 Ala Arg Ala Leu Asp Glu Phe Thr Val Glu Gly Met Ala Thr Ala Ile  
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 Arg Thr Gly Leu Ala Ala Gly Ala Arg Pro Lys Arg Arg Ala Ala Lys  
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 Lys Ser Gly Pro Ala Ala Ser Gly Asp Thr Leu Ala Ser Pro Met Gln  
 515 520 525  
 Gly Thr Ile Val Lys Ile Ala Val Glu Glu Gly Gln Glu Val Gln Glu  
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 Gly Asp Leu Ile Val Val Leu Glu Ala Met Lys Met Glu Gln Pro Leu  
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 35 40 45



Ala Leu Gly Gly Asp Thr Pro Ala Thr Ser Tyr Leu Asp Ile Ala Lys  
 50 55 60  
 Val Leu Lys Ala Ala Arg Glu Ser Gly Ala Asp Ala Ile His Pro Gly  
 65 70 75 80  
 Tyr Gly Phe Leu Ser Glu Asn Ala Asp Phe Ala Gln Ala Val Leu Asp  
 85 90 95  
 Ala Gly Leu Ile Trp Ile Gly Pro Pro Pro His Ala Ile Arg Asp Arg  
 100 105 110  
 Gly Glu Lys Val Ala Ala Arg His Ile Ala Gln Arg Ala Gly Ala Pro  
 115 120 125  
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 130 135 140  
 Ala Phe Ala Lys Glu His Gly Leu Pro Ile Ala Ile Lys Ala Ala Phe  
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 165 170 175  
 Pro Glu Leu Tyr Asp Ser Ala Val Arg Glu Ala Val Ala Ala Phe Gly  
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 Arg Gly Glu Cys Phe Val Glu Arg Tyr Leu Asp Lys Pro Arg His Val  
 195 200 205  
 Glu Thr Gln Cys Leu Ala Asp Thr His Gly Asn Val Val Val Val Ser  
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 Thr Arg Asp Cys Ser Leu Gln Arg Arg His Gln Lys Leu Val Glu Glu  
 225 230 235 240  
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 Ser Ser Lys Ala Ile Leu Lys Glu Ala Gly Tyr Val Gly Ala Gly Thr  
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 Ile Asp Leu Val Arg Glu Met Phe Arg Ile Ala Asp Gly Glu Glu Leu  
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 Asn Gly Asp His Pro Gly Arg Gly Phe Leu Pro Ala Pro Gly Thr Val  
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Thr Gly Ser Thr Asp Pro Phe Thr Val His Thr Arg Trp Ile Glu Thr  
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Glu Phe Val Asn Glu Ile Lys Pro Phe Thr Thr Pro Ala Asp Thr Glu  
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Arg Thr Gly Leu Ala Ala Gly Ala Arg Pro Lys Arg Arg Ala Ala Lys  
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Lys Ser Gly Pro Ala Ala Ser Gly Asp Thr Leu Ala Ser Pro Met Gln  
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Gly Thr Ile Val Lys Ile Ala Val Glu Glu Gly Gln Glu Val Gln Glu  
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Gly Asp Leu Ile Val Val Leu Glu Ala Met Lys Met Glu Gln Pro Leu  
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tcgcagatgt	tcataccggg	cccgacgtc	gtcaaggcgg	tcaccggcga	ggagatcacg	660

cagaacggtc	tgggcggcgc	cgacgtgcac	gccgagacgt	ccggcgtgtg	ccacttcgcc	720
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tgcgacgcct	tcaacatccc	gatcatcact	cttctggacg	taccgggctt	cctgccccgg	1140
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gcccgcgcgc	gcccgcgcgc
cgcttggaac	gcgagccggg
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35 40 45	
Arg Glu Arg Ile Glu Leu Leu Leu Asp Pro Gly Ser Phe Arg Glu Val	
50 55 60	
Glu Gln Leu Arg Arg His Arg Ala Thr Gly Phe Gly Leu Glu Ala Lys	
65 70 75 80	
Lys Pro Tyr Thr Asp Gly Val Ile Thr Gly Trp Gly Thr Val Glu Gly	
85 90 95	
Arg Thr Val Phe Val Tyr Ala His Asp Phe Arg Ile Phe Gly Gly Ala	
100 105 110	
Leu Gly Glu Ala His Ala Thr Lys Ile His Lys Ile Met Asp Met Ala	
115 120 125	
Ile Ala Ala Gly Ala Pro Leu Val Ser Leu Asn Asp Gly Ala Gly Ala	
130 135 140	
Arg Ile Gln Glu Gly Val Ser Ala Leu Ala Gly Tyr Gly Gly Ile Phe	
145 150 155 160	

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Gln	Arg	Asn	Thr	Lys	Ala	Ser	Gly	Val	Ile	Pro	Gln	Ile	Ser	Val	Met
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Leu	Gly	Pro	Cys	Ala	Gly	Gly	Ala	Ala	Tyr	Ser	Pro	Ala	Leu	Thr	Asp
			180					185					190		
Phe	Val	Phe	Met	Val	Arg	Asp	Thr	Ser	Gln	Met	Phe	Ile	Thr	Gly	Pro
			195				200					205			
Asp	Val	Val	Lys	Ala	Val	Thr	Gly	Glu	Glu	Ile	Thr	Gln	Asn	Gly	Leu
	210					215					220				
Gly	Gly	Ala	Asp	Val	His	Ala	Glu	Thr	Ser	Gly	Val	Cys	His	Phe	Ala
225					230					235					240
Tyr	Asp	Asp	Glu	Glu	Thr	Cys	Leu	Ala	Glu	Val	Arg	Tyr	Leu	Leu	Ser
			245						250					255	
Leu	Leu	Pro	Gln	Asn	Asn	Arg	Glu	Asn	Pro	Pro	Arg	Ala	Glu	Ser	Ser
			260					265					270		
Asp	Pro	Val	Asp	Arg	Arg	Ser	Asp	Thr	Leu	Leu	Asp	Leu	Val	Pro	Ala
		275					280					285			
Asp	Gly	Asn	Arg	Pro	Tyr	Asp	Met	Thr	Lys	Val	Ile	Glu	Glu	Leu	Val
	290					295					300				
Asp	Glu	Gly	Glu	Tyr	Leu	Glu	Val	His	Glu	Arg	Trp	Ala	Arg	Asn	Ile
305					310					315					320
Ile	Cys	Ala	Leu	Ala	Arg	Leu	Asp	Gly	Arg	Val	Val	Gly	Ile	Val	Ala
			325					330						335	
Asn	Gln	Pro	Gln	Ala	Leu	Ala	Gly	Val	Leu	Asp	Ile	Glu	Ala	Ser	Glu
			340					345					350		
Lys	Ala	Ala	Arg	Phe	Val	Gln	Met	Cys	Asp	Ala	Phe	Asn	Ile	Pro	Ile
		355					360					365			
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	370					375					380				
His	Gly	Gly	Ile	Ile	Arg	His	Gly	Ala	Lys	Leu	Leu	Tyr	Ala	Tyr	Cys
385					390					395					400
Asn	Ala	Thr	Val	Pro	Arg	Ile	Ser	Leu	Ile	Leu	Arg	Lys	Ala	Tyr	Gly
				405					410					415	
Gly	Ala	Tyr	Ile	Val	Met	Asp	Ser	Gln	Ser	Ile	Gly	Ala	Asp	Leu	Thr
			420					425					430		
Tyr	Ala	Trp	Pro	Thr	Asn	Glu	Ile	Ala	Val	Met	Gly	Ala	Glu	Gly	Ala
		435				440						445			
Ala	Asn	Val	Ile	Phe	Arg	Arg	Gln	Ile	Ala	Asp	Ala	Glu	Asp	Pro	Glu
	450					455					460				
Ala	Met	Arg	Ala	Arg	Met	Val	Lys	Glu	Tyr	Lys	Ser	Glu	Leu	Met	His
465					470					475					480
Pro	Tyr	Tyr	Ala	Ala	Glu	Arg	Gly	Leu	Val	Asp	Asp	Val	Ile	Asp	Pro
				485					490					495	
Ala	Glu	Thr	Arg	Glu	Val	Leu	Ile	Thr	Ser	Leu	Ala	Met	Leu	His	Thr
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100045512 093102

Lys His Ala Asp Leu Pro Ser Arg Lys His Gly Asn Pro Pro Gln  
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<211> 65  
<212> PRT  
<213> Streptomyces coelicolor

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20 25 30

Pro Ala Glu Ile Ala Pro Thr His Gly Gly Gly Arg Ala Arg Ala Gly  
35 40 45

Trp Arg Arg Leu Glu Arg Glu Pro Gly Phe Arg Ala Pro His Ser Trp  
50 55 60

Arg  
65